

## CLAIMS

1. An amplitude information extraction apparatus comprising:

an amplitude information acquisition section that  
5 acquires amplitude information of a transmission signal from an I component and Q component of the transmission signal;

a phase information acquisition section that  
acquires phase information of the transmission signal  
10 from the I component and Q component of the transmission signal; and

an amplitude error correction section that corrects  
an amplitude error of the amplitude information based  
on the phase information.

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2. The amplitude information extraction apparatus  
according to claim 1, wherein said amplitude error  
correction section refers to information of a  
predetermined lower bit of the phase information and  
20 determines a parameter used to correct the amplitude  
error.

3. The amplitude information extraction apparatus  
according to claim 2, wherein said parameter is obtained  
25 by performing collinear approximation on an amplitude  
error to be corrected every predetermined area.

4. The amplitude information extraction apparatus according to claim 2, wherein said parameter is a value specific to each of the information of the referred predetermined lower bit.

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5. A polar loop modulation apparatus comprising the amplitude information extraction apparatus according to claim 1.

10 6. An amplitude information extraction method comprising:

an amplitude information acquisition step of acquiring amplitude information of a transmission signal from an I component and Q component of the transmission  
15 signal;

a phase information acquisition step of acquiring phase information of the transmission signal from the I component and Q component of the transmission signal;  
and

20 an amplitude error correction step of correcting an amplitude error of the amplitude information based on the phase information.